REMARKS

Certain claims are revised to overcome the objections noted by the Examiner, and to set forth patentable subject matter relative to the cited art. Claims 12 and 14 are cancelled without prejudice, elements of those claims now being incorporated into Claim 1. Claims 15 and 16 are revised for proper dependency. Claims 18-21 are cancelled without prejudice. Claims 1-11, 13, 15-17, and 22-24 remain, with no claim previously allowed.

The objection to Figure 2 of the drawing is noted. In response, a substitute sheet containing Fig. 2 is submitted with this response. That substitute sheet changes "TEST" to --TEXT-- in block 240. The phrase "TEXT-TO-SPEECH" is also hyphenated in that block, and "GRAMMAR" in block 220 is deunderlined for improved style. The substitute sheet of drawing is submitted as overcoming the objection to Figure 2.

The objections to certain claims, pages 3-6 of the Office action, are noted. Responding to those objections, appropriate corrections are made to the claims amended herein.

Claims 1-6, 8-13, 17-19, and 22-24 were rejected as unpatentable over *Kennewick* (US 2004/0044516) in view of *Crepy* (US 6,622,121). The Applicant respectfully traverses that rejection as possibly applied to the amended claims.

Claim 1 recites an embodiment of the Applicant's method for testing and improving the performance of a speech recognition engine. As revised, that claim comprises loading one or more words, phrases, or utterances into a memory location; identifying one or more of those words, phrases, or utterances for recognition by a speech recognition engine; and categorizing the one or more words, phrases, or utterances by grammar type so that all words, phrases or utterances of the same grammar type are grouped together in a grammar sub-tree. The claimed method then passes those one or more identified speech elements to a text-to-speech conversion module; and passes an audio pronunciation of each element, grouped in a selected grammar sub-tree, from the text-to-speech conversion module to the speech recognition engine. A recognized word, phrase, or utterance for each audio pronunciation is created and passed to the speech recognition engine, where the method analyzes each recognized word, phrase, or utterance from the selected grammar sub-tree to determine how closely each recognized

speech element approximates the respective audio pronunciation from which each recognized speech element is derived.

Selecting a particular grammar sub-tree, and extracting all words or utterances contained in the selected grammar sub-tree for testing by the speech recognition engine, is described in the paragraph bridging pages 9 and 10 of the Applicant's specification. Please also see page 9, lines 7-24 for a discussion of categorizing utterances according to grammar sub-trees, and the improved performance resulting therefrom.

Kennewick discloses a method for responding to natural-language speech, such as queries or comments spoken by a user (paragraph 0010) in the natural of a question or a command (paragraph 0081, lines 1-2). Once the utterance is captured, it is parsed and interpreted to determine the command contained in the utterance (paragraph 0187, lines 8-10). Scoring techniques may be applied to generate a confidence level that the user's question or command is correctly understood. However, *Kennewick* does not disclose or teach categorizing the utterances by grammar type to group together, in a grammar sub-tree, all utterances of a same grammar type. Lacking a selected grammar sub-tree grouping as required by Claim 1, it follows that *Kennewick* also fails to teach analyzing each recognized utterance <u>from the selected grammar sub-tree</u> to determine how closely each recognized utterance approximates the respective audio pronunciation from which the recognized utterance is derived.

Crepy does not provide the above-mentioned omission of *Kennewick* and, in fact, was not cited for that purpose. *Crepy* discloses a method for testing speech recognition systems, that method including generating an audio file by a text-to-speech program, and performing a speech recognition operation over the audio file (column 4, lines 7-10). According to *Crepy*, the advantage are increased speed and lack of external disturbances due to ambient noise that might appear in an audio file available in analog form (column 4, lines 16-23). However, nothing in *Crepy* teaches or suggests categorizing utterances by grammar type and grouping those utterances of a same grammar type in a grammar sub-tree for analysis of each recognized utterance from the selected grammar sub-tree. Accordingly, Claim 1 and the claims dependent thereon define a method for testing and approving the performance of a speech recognition engine that would not have been obvious to one of ordinary skill in the art, at the time of making the present invention.

Independent Claim 22 is revised to contain elements that, as discussed above with respect to Claim 1, are novel and unobvious over *Kennewick* and *Crepy*. Accordingly, the Applicant submits that Claim 22 is patentable over those references for the reasons set forth above with respect to Claim 1.

Claims 14-16 are rejected as unpatentable over *Kennewick* and *Crepy* further in view of *Knott* (US 2003/0191648). *Knott* is cited as categorizing utterances by answer type and grouping those answers to indicate affirmations and refutations similar to what interpretations of grammar type. The Applicant respectfully traverses the Examiner's application of *Knott* and the rejection based thereon.

Knott merely teaches providing a limited glossary of affirmations or refutations that are more easily interpreted (page 3, paragraph 0021, lines 5-7). Voice recognition is tested against glossary entries, which look for a relatively simple or anticipated glossary of utterances like "yes" or "no", stock symbols, and the like (paragraph 0018, page 3). However, *Knott* does not disclose categorizing utterances by grammar type, whereby all utterances of a same grammar type are grouped together in a grammar sub-tree. Accordingly, combining *Knott* with *Kennewick* and *Crepy*, as the rejection suggests would not have placed one or ordinary skill in possession of the invention as defined in Claims 15 and 16.

The foregoing is submitted as a complete response to the Office action identified above. The Applicant respectfully submits that the present application is in condition for allowance and solicits a notice to that effect.

Respectfully submitted,

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